MULTICAST CONTENT INTERNET MULTICAST SERVER <u>105</u> <u>MULTICAST DATA NETWORK</u> BORDER GATEWAY BILLING SERVER LAST HOP ROUTER DECRYPTION KEY JOIN JOIN REQUEST Figure 1A USER TERMINAL

<u>.</u>

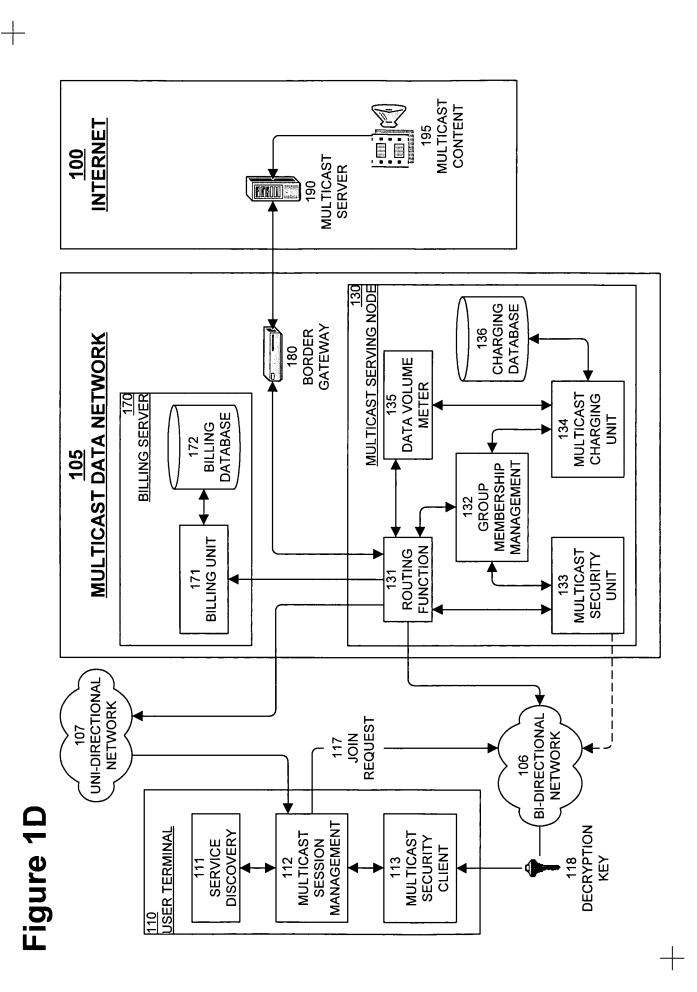
MULTICAST CONTENT 195 INTERNET 100 190 MULTICAST SERVER 120 LAST HOP ROUTER CHARGING DATABASE BORDER GATEWAY 126 **MULTICAST DATA NETWORK** DATA VOLUME METER MULTICAST CHARGING BILLING SERVER DATABASE LINO 172 BILLING 105 GROUP MEMBERSHIP MANAGEMENT 122 **BILLING UNIT** FUNCTION MULTICAST SECURITY ROUTING 121 LIND 118 DECRYPTION 1 KEY REQUEST NO N MANAGEMENT MULTICAST SECURITY CLIENT **USER TERMINAL** DISCOVERY MULTICAST SERVICE SESSION 113

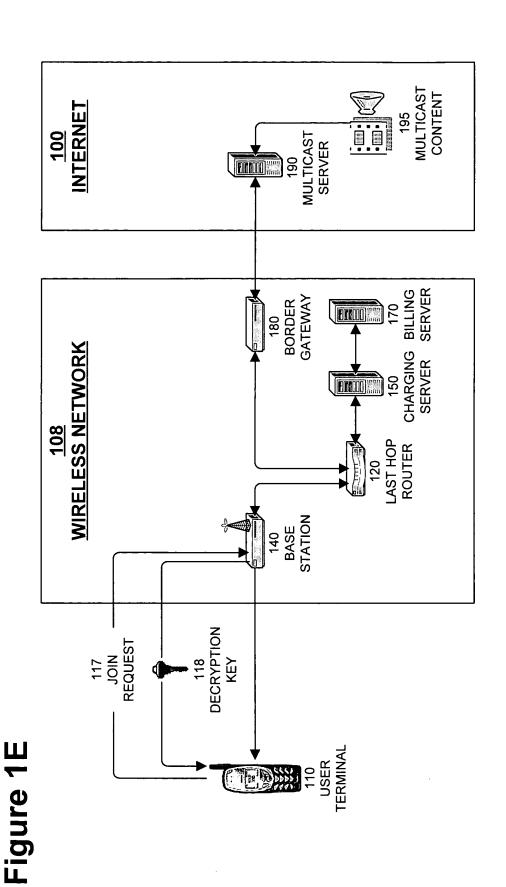
Figure 1B

195 MULTICAST CONTENT INTERNET MULTICAST SERVER 100 190 <u>105</u> MULTICAST DATA NETWORK 180 BORDER GATEWAY BILLING SERVER 5 130 MULTICAST SERVING NODE BI-DIRECTIONAL NETWORK 107 UNI-DIRECTIONAL NETWORK DECRYPTION KEY 117 JOIN REQUEST USER TERMINAL

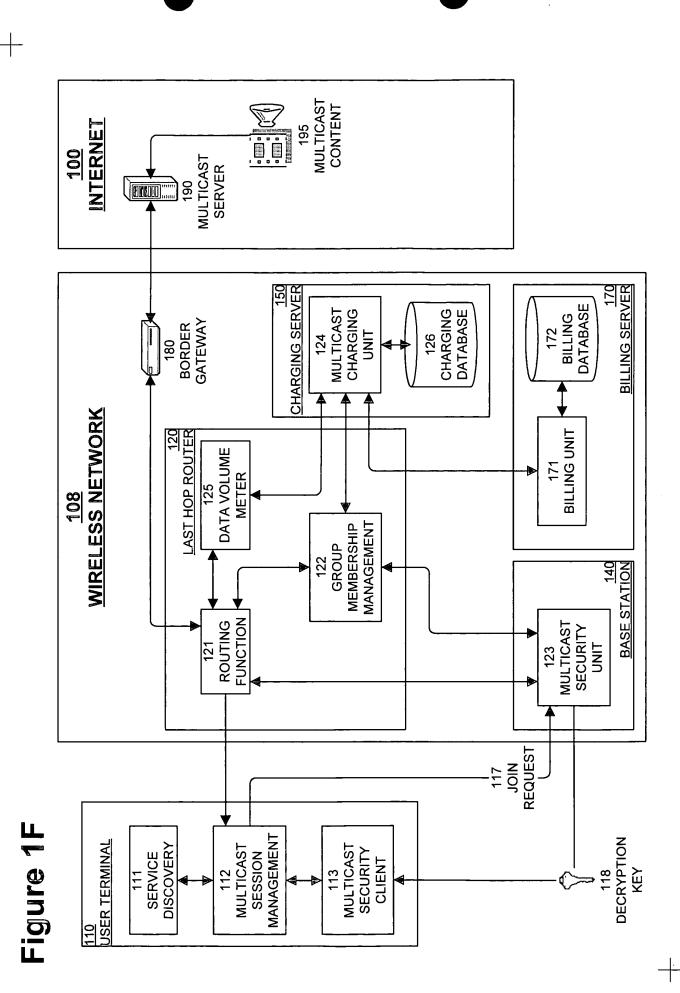
Figure 1C

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MULTICAST CONTENT 195 INTERNET 100 MULTICAST SERVER 190 170 BILLING SERVER CHARGING SERVER **BILLING UNIT** MULTICAST CHARGING DATABASE CHARGING DATABASE BILLING LIND 172 GATEWAY BORDER WIRELESS NETWORK LAST HOP ROUTER BASE STATION LINK LAYER GROUP MEMBERSHIP MANAGEMENT DATA VOLUME 40 00 00 METER GROUP MEMBERSHIP **NETWORK LAYER** MANAGEMENT FUNCTION MULTICAST SECURITY ROUTING LNO 117 JOIN REQUEST 118 DECRYPTION KEY MANAGEMENT MULTICAST SECURITY **USER TERMINAL** DISCOVERY MULTICAST SESSION SERVICE CLIENT 113 112

Figure 1G

Figure 2A

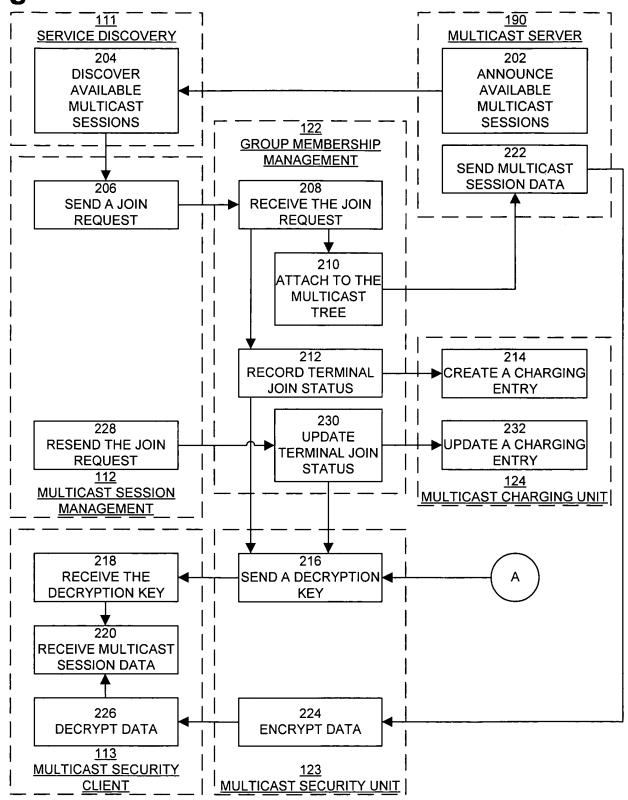


Figure 2B

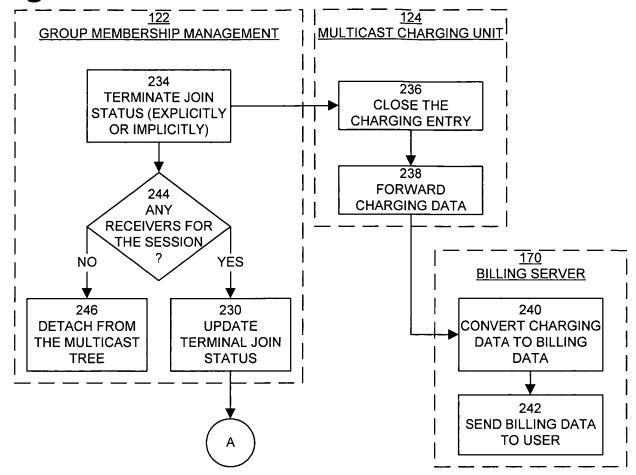


Figure 2C

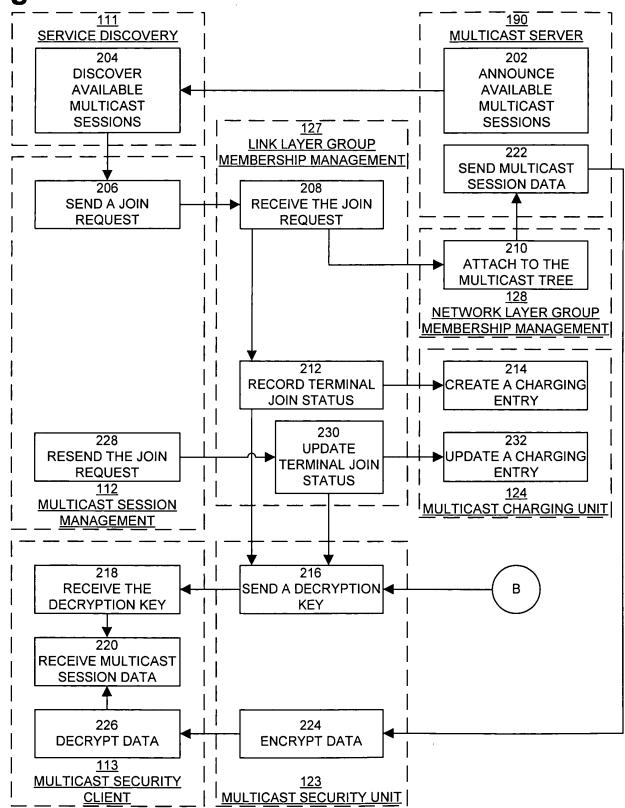


Figure 2D

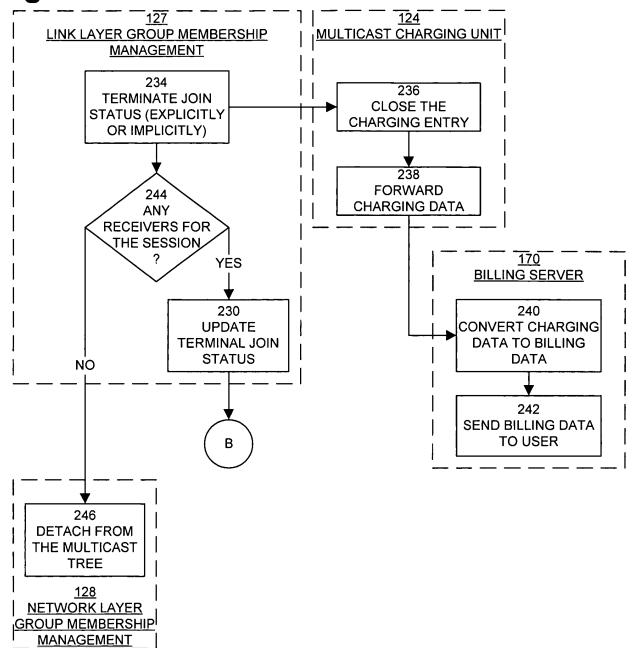


Figure 3A

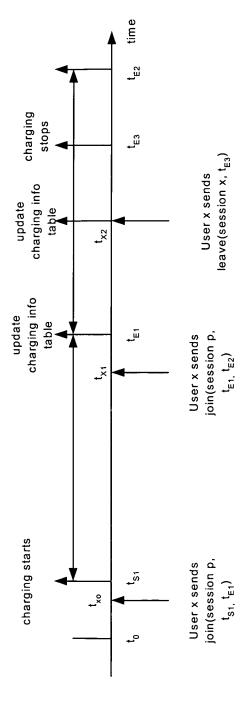


Figure 3B

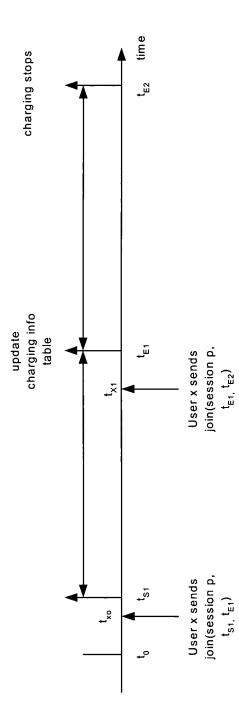


Figure 3C

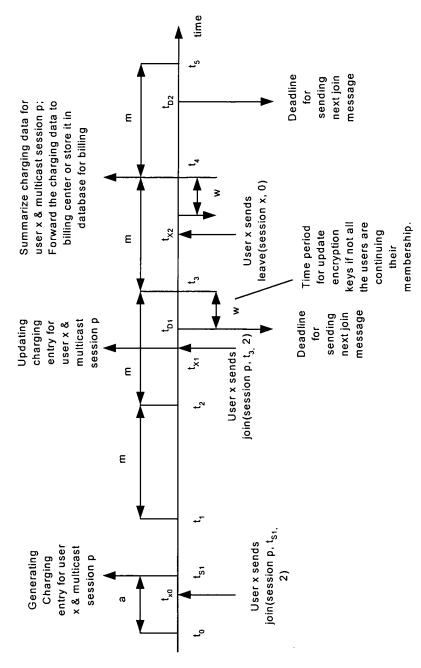
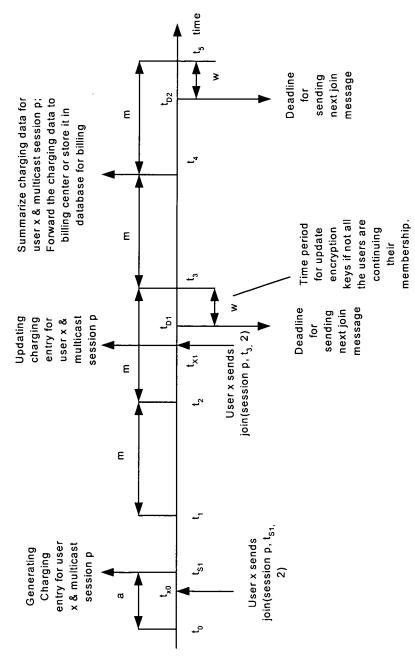


Figure 3D



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Figure 4A

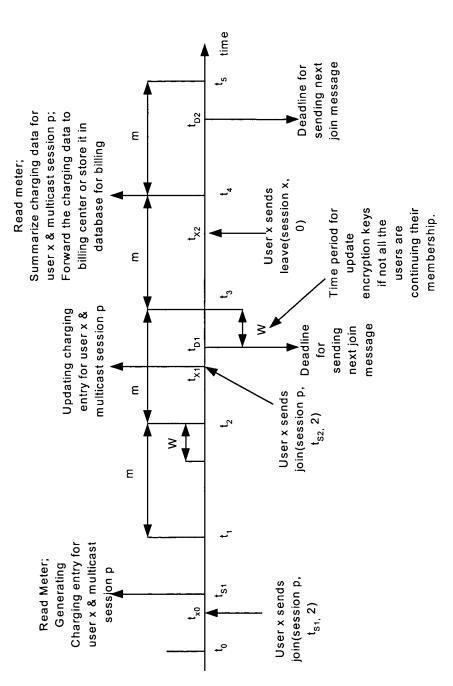


Figure 4B

